

FIG. 4



2/3

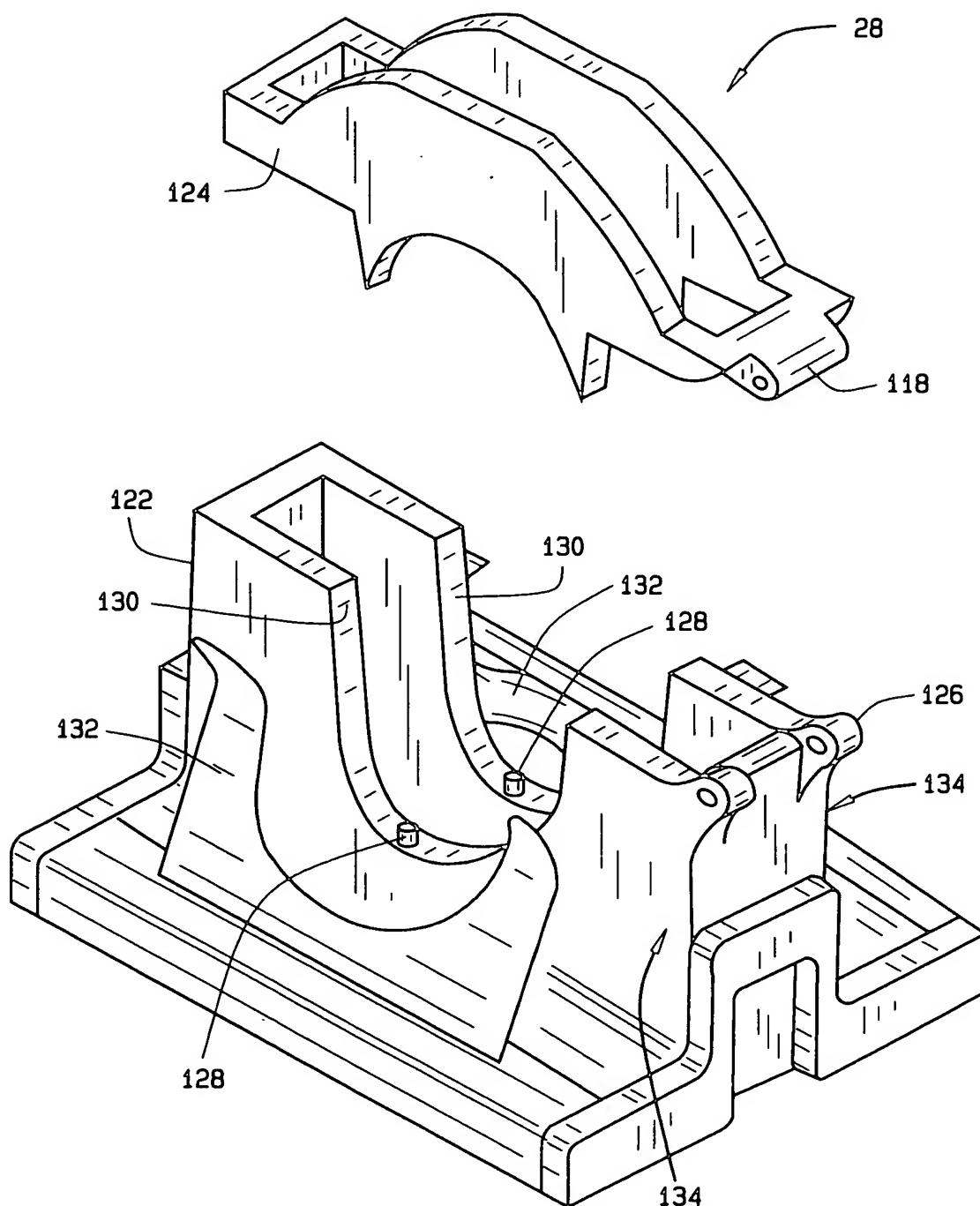


FIG. 5



3/3

RE

OCT 22 2003

TC 1700

200

- 206 A DESIRED TOOLING PLATE IS SELECTED
- 212 CLAMPING BLOCK BOTTOM HALVES ARE POSITIONED ON TOOLING PLATE
- 218 CLAMPING BLOCK BOTTOM HALVES ARE CONNECTED TO TOOLING PLATE
- 224 TUBING IS CRADLED IN THE SADDLES AND CLAMPING BLOCK BOTTOM HALVES
- 230 CLAMPING BLOCK TOP HALVES ARE PLACED OVER TUBING AND COUPLED TO BOTTOM HALVES
- 242 BOTTOM HALVES ARE DECOUPLED FROM TOOLING PLATE WITH TUBING REMAINING CLAMPED
- 248 CLAMPING BLOCK IS COUPLED TO THE CUTTING MACHINE
- 254 TUBING IS CUT SUCH THAT DEBURRING IS NOT NEEDED
- 260 CLAMPING BLOCK DECOUPLED FROM CUTTING MACHINE WITH TUBING REMAINING CLAMPED
- 268 WELDING CASSETTE SECOND HALF IS PLACED IN AN OPEN POSITION
- 272 A CLAMPING BLOCK HOLDING TUBING IS PLACED ON EACH SIDE OF WELDING CASSETTE
- 278 CLOCKING SLOT OF EACH CLAMPING BLOCK IS MATED WITH A COCKING PIN
- 284 WELDING CASSETTE SECOND HALF IS PLACED IN THE CLOSED POSITION
- 290 WELDING HEAD AUTOGENEIOUSLY WELDS TOGETHER THE TWO PIECE OF THIN-WALL TUBING

FIG. 8